Boeing Commercial Airplane Group
P.O. Box [illegible]
Seattle, WA 98124-2207

233938

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FAA-03-14305-5

Docket Management System
Docket No. FAA–2003–14305
US Department of Transportation
Room PL 401
400 Seventh Street SW
Washington, DC 20590-0001

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Subject: Boeing's Comments to Federal Docket No. FAA–2003–14305, NPRM 14 CFR Parts 71, et al. Special Operating Rules for the Conduct of Instrument Flight Rules (IFR) Area Navigation (RNAV) Operations Using Global Positioning Systems (GPS) in Alaska; Proposed Rule

Dear Sirs:

A Final Rule should not be issued without major revisions to this proposal. While the goal and intent of this NPRM have merit, and the objective of the NPRM to support additional GPS-based operations in Alaska airspace is appropriate, this particular NPRM has serious conceptual flaws and adverse collateral effects. Because of the serious nature of the concerns with the current wording of the NPRM, any subsequent revisions to the NPRM should be coordinated through both the AWO and TAOARC processes and be consistent with other related NPRMs, both for RNAV [Docket No. FAA–2002–14002], and for Enhanced Flight Vision Systems [Docket No. FAA–2003–14449]. This NPRM is intentionally written to cater to Safe Flight 21-type aircraft and will preclude a large segment of the aviation market from choosing to develop RNP systems using any and all forms of GNSS.

Because of the very short amount of time FAA allowed for response to this NPRM, and the existence of other significant NPRM actions that have also recently been released and which have direct overlapping relationships to this proposal, it has been very difficult to provide comprehensive comments. Examples of the critical areas of concern in this NPRM follow.

1. The NPRMs provisions are inconsistent with movement toward a Performance-based International Airspace System (INAS), and are inconsistent with applications of RNP (e.g., it addresses only specific limited technologies; does not credit other more capable technologies, and has underlying angular criteria implications that are inappropriate in an inherently linear future RNAV and RNP criteria world).

2. The NPRM sets precedents with regard to inappropriate definitions and concepts that are inconsistent with and adversely interfere with necessary "Global" navigation systems evolution (e.g., Special MEA: 4000G).

3. By its issuance, the NPRM could inappropriately set a precedent, inferring that this type of SFAR is needed when it is not, and thus imply that other better and more capable (e.g., RNP-based or GNSS based) systems may not be usable or eligible for MEA, route, or procedure credit, or that even some current operations (e.g., Alaska Airlines RNP operations) may need be addressed by such an SFAR which in fact is not necessary.

4. The intended Capstone related capability can more easily and readily be achieved other ways (e.g., by FAA approval of specific means via Op Spec, FSDO LOA, or various FAA Orders and associated AIM changes). Even if an SFAR was desired (and it should not be necessary), it could be done via a very simple SFAR issuance that essentially says that "Other routes, procedures, navigation systems, or operations may be authorized in Alaska airspace, as determined appropriate by the Administrator".

5. The currently proposed SFAR appears to set criteria that may actually be harmful to expeditious and beneficial Alaska airspace management and evolution by implicitly invoking airspace standards that are overly restrictive and constraining (e.g., not recognizing the credit of linear criteria capable systems, or better systems related to RNP and networks of LAAS, or limiting airspace planning to very narrowly defined specific systems such as for special GPS MEAs [4000G], when other combinations of navigation systems could provide equal or better airspace performance).

6. Language of the NPRM is technically flawed in that it make assertions like "...(GNSS) encompasses all satellite ranging technologies", when in fact the performance of some satellite-based systems may or may not alone meet specific RNP provisions (e.g., some international systems), particularly in some regions of Alaska airspace.

7. The NPRM appears to exclusively attempt to credit systems meeting criteria only of TSO C145a/146a. This is not appropriate technically because of certain characteristics of those systems which can be contrary to the general direction navigation needs to evolve in an RNP-based global system (e.g., aspects of inappropriate angular criteria of C146 versus the more appropriate linear criteria of RNP; and system pilot interface issues). While these C145a/C146a systems may be beneficially purchased and operationally used, their inappropriate (e.g., angular) characteristics should not be the basis (and certainly not exclusive basis) for future INAS procedure or airspace design, even in a limited region, in limited circumstances.

8. Application of any of this SFAR to FAR 129 Operators is most inappropriate (e.g., international operators flying in US airspace). International Operations and international operators should be planning and equipping exclusively based on RNP-based criteria, ILS, LAAS, and GLS. Even if WAAS is used as a sensor in RNAV systems, international navigation criteria should be principally focused on RNP capability, not be defined as sensor specific.

9. This NPRM is not currently consistent with some key FAA criteria (AC120-29A) and the direction key large aircraft manufacturers and operators are evolving future navigation systems or operational capability. If adopted without significant change, any final rule based significantly on this NPRM could unnecessarily restrict and inhibit beneficial and necessary evolution of RNP related systems and applications.

10. Numerous areas of analysis or comment in the NPRM preamble are also inappropriate, incorrect, or misleading. Significant revision of the preamble is also needed, before any final rule is issued (e.g., incorrect suppositions about the applicability or flexibility of current rules).

Specific Recommended Actions:

1. Do not issue a Final Rule based on the present content of this NPRM's proposal.

2. Delegate the editing of this SFAR to both the AWO and TAOARC groups, so that any revised SFAR can be consistent with the provisions of a significantly revised RNAV and EVS NPRM. Adjust any comment deadlines and revision proposals to a mutually consistent milestone timeline, for the set of 3 NPRM changes.

3. Do not issue this rule alone, and particularly do not issue it in a condition inconsistent with the other AWO and TAOARC revised NPRM and Final Rule proposals.

4. Assure that any revised SFAR for the purpose of evolving navigation provisions in Alaska airspace, and particularly any SFAR's definitions and concepts, are consistent with evolving provisions for RNP and a "Performance-based INAS".

Sincerely,

ORIGINAL SIGNED BY:

Chet Ekstrand
VP, Regulatory Affairs